

Amendments to the Claims

This listing of claims will replace all prior versions of claims in the application.

33. (Previously Presented) An in-plane switching mode liquid crystal display comprising:

gate and data bus lines on a first substrate defining a pixel region;
a common bus line parallel to the gate bus line;
a thin film transistor at a crossing of the gate and data bus lines, the thin film transistor having a gate electrode, a gate insulator, a semiconductor layer, a source electrode, and a drain electrode;

data and common electrodes parallel to the data bus line in the pixel region, the data electrodes including a first capacitor portion overlapping the common line and the common electrodes including a second capacitor portion overlapping the common line, the first and second capacitor portions substantially parallel to the gate bus line, for first and second storage capacitors, respectively;

a passivation layer over the thin film transistor and the data electrode, wherein the common electrode is formed on the passivation layer parallel to the data electrode and overlapping the gate and data bus lines; and

a first alignment layer on the common electrode.

34. (Previously Presented) The in-plane switching mode liquid crystal display of claim 33, further comprising a black mask and a color filter on a second substrate opposite to the first substrate.

35. (Previously Presented) The in-plane switching mode liquid crystal display of claim 34, wherein the black mask includes one of a Cr and a CrO_x metal layer.

36. (Previously Presented) The in-plane switching mode liquid crystal display of claim 35, wherein the metal layer has a thickness of about 0.1 μm and a width of about 10 μm.

37. (Previously Presented) The in-plane switching mode liquid crystal display of claim 34, further comprising a second alignment layer on the color filter layer.

38. (Previously Presented) The in-plane switching mode liquid crystal display of claim 37, wherein the second alignment layer includes one of polyimide and photo-alignment materials.

39. (Previously Presented) The in-plane switching mode liquid crystal display of claim 34, further comprising a liquid crystal layer between the first and second substrates.

40. (Previously Presented) The in-plane switching mode liquid crystal display of claim 33, further comprising gate, data, and common pads connected to driving circuits.

41. (Previously Presented) The in-plane switching mode liquid crystal display of claim 40, wherein the gate and data bus lines are connected to the driving circuits.

42. (Previously Presented) The in-plane switching mode liquid crystal display of claim 40, wherein the common bus line is grounded through the common pad.

43. (Previously Presented) The in-plane switching mode liquid crystal display of claim 40, wherein the gate, data and common pads include first, second and third metal layers, respectively.

44. (Previously Presented) The in-plane switching mode liquid crystal display of claim 43, wherein the first metal layers includes Mo/Al double metal layers together with the gate electrode and common bus line.

45. (Previously Presented) The in-plane switching mode liquid crystal display of claim 43, wherein the second metal layer includes Cr together with the source and drain electrodes.

46. (Previously Presented) The in-plane switching mode liquid crystal display of claim 43, wherein the third metal layer includes indium tin oxide together with the common electrode.

47. (Previously Presented) The in-plane switching mode liquid crystal display of claim 33, further comprising a grounding wiring connected to the gate and data bus lines through an electrostatic shielding circuit.

48. (Currently Amended) An in-plane switching mode liquid crystal display comprising:

gate and data bus lines on a first substrate defining a pixel region;
a common bus line parallel to the gate bus line;
a thin film transistor at a crossing of the gate and data bus lines, the thin film transistor having a gate electrode, a gate insulator, a semiconductor layer, a source electrode, and a drain electrode;
data electrodes parallel to the data bus line in the pixel region,
common electrodes including parallel portions substantially parallel to the data bus line and a connecting portion substantially parallel to the gate bus line, the parallel portions extending from the connecting portion and having an oblique side, wherein the oblique side is located at a crossing of the data electrodes and common electrodes;
a passivation layer over the thin film transistor and the data electrode; and
a first alignment layer on the common electrode.

49. (Previously Presented) The in-plane switching mode liquid crystal display of claim 48, wherein the oblique side is inclined counterclockwise to an X axis direction with an angle θ_A .

50. (Previously Presented) The in-plane switching mode liquid crystal display of claim 48, wherein the oblique side is inclined clockwise to an X axis direction with an angle θ_B .

51. (Previously Presented) The in-plane switching mode liquid crystal display of claim 49, wherein an alignment direction is inclined counterclockwise to an X axis direction with an angle θ_R .

52. (Previously Presented) The in-plane switching mode liquid crystal display of claim 50, wherein an alignment direction is inclined counterclockwise to an X axis direction with an angle θ_R .

53. (Previously Presented) The in-plane switching mode liquid crystal display of claim 51, wherein the range of θ_R is about 0° to 90° .

54. (Previously Presented) The in-plane switching mode liquid crystal display of claim 52, wherein the range of θ_R is about 0° to 90° .

55. (Previously Presented) The in-plane switching mode liquid crystal display of claim 53, wherein the range of θ_A is about θ_R to 90° .

56. (Previously Presented) The in-plane switching mode liquid crystal display of claim 54, wherein the range of θ_B is about $90^\circ - \theta_R$ to 90° .

57. (Previously Presented) The in-plane switching mode liquid crystal display of claim 49, wherein θ_A is about 45° .

58. (Previously Presented) The in-plane switching mode liquid crystal display of claim 50, wherein θ_B is about 45° .

59. (Previously Presented) The in-plane switching mode liquid crystal display of claim 51, wherein θ_R is about 75°.

60. (Previously Presented) The in-plane switching mode liquid crystal display of claim 52, wherein θ_R is about 75°.

61. (Previously Presented) The in-plane switching mode liquid crystal display of claim 48, wherein the common electrode is formed on the passivation layer.

62. (Previously Presented) The in-plane switching mode liquid crystal display of claim 48, wherein the common electrode overlaps the gate and data bus lines.

63. (Previously Presented) The in-plane switching mode liquid crystal display of claim 48, wherein the data and common electrodes have portions for first and second storage capacitors.

64. (Previously Presented) An in-plane switching mode liquid crystal display comprising:

gate and data bus lines on a first substrate defining a pixel region;
a common bus line parallel to the gate bus line;
a thin film transistor at a crossing of the gate and data bus lines, the thin film transistor having a gate electrode, a gate insulator, a semiconductor layer, a source electrode, and a drain electrode;

data and common electrodes parallel to the data bus line in the pixel region, the data electrodes including a first capacitor portion overlapping the common line and the common electrodes including a second capacitor portion overlapping the common line, the first and second capacitor portions substantially parallel to the gate bus line;

a passivation layer over the thin film transistor and the data electrode, wherein the common electrode is formed on the passivation layer parallel to the data electrode;

a light shielding layer on the passivation layer; and

a first alignment layer on the common electrode.

65. (Previously Presented) The in-plane switching mode liquid crystal display of claim 64, wherein the common electrode and the light shielding layer include Mo and indium tin oxide.

66. (Previously Presented) The in-plane switching mode liquid crystal display of claim 65, wherein the thickness of the Mo is about 1000Å.

67. (Previously Presented) An in-plane switching mode liquid crystal display, comprising:

gate and data bus lines on a first substrate defining a pixel region;

a common bus line parallel to the gate bus line;

a thin film transistor at a crossing of the gate and data bus lines, the thin film transistor having a gate electrode, a gate insulator, a semiconductor layer, a source electrode, and a drain electrode;

data and common electrodes parallel to the data bus line in the pixel region;
a passivation layer over the thin film transistor and the data electrode, wherein the common electrode is formed on the passivation layer parallel to the data electrode;
a light shielding layer on the passivation layer; and
a first alignment layer on the common electrode,
wherein the light shielding layer overlaps a portion of the gate bus line through a hole in the gate insulator and the passivation layer.

68. (Previously Presented) The in-plane switching mode liquid crystal display of claim 64, wherein the data and common electrodes have portions for first and second storage capacitors.

69. (Previously Presented) An in-plane switching mode liquid crystal display comprising:
gate and data bus lines on a first substrate defining a pixel region;
a common bus line parallel to the gate bus line;
a thin film transistor at a crossing of the gate and data bus lines, the thin film transistor having a gate electrode, a gate insulator, a semiconductor layer, a source electrode, and a drain electrode;

data and common electrodes parallel to the data bus line in the pixel region, the data electrodes including a first capacitor portion overlapping the common line and the common electrodes including a second capacitor portion overlapping the common line, the first and second capacitor portions substantially parallel to the gate bus line;

a passivation layer over the thin film transistor and the data electrode, wherein the common electrode is formed on the passivation layer parallel to the data electrode and overlaps the gate and data bus lines;

a light shielding layer on the passivation layer; and

a first alignment layer on the common electrode.

70. (Previously Presented) The in-plane switching mode liquid crystal display of claim 69, wherein the common electrode and the light shielding layer include opaque materials.

71. (Previously Presented) The in-plane switching mode liquid crystal display of claim 69, wherein the data and common electrodes have portions for first and second storage capacitors.